

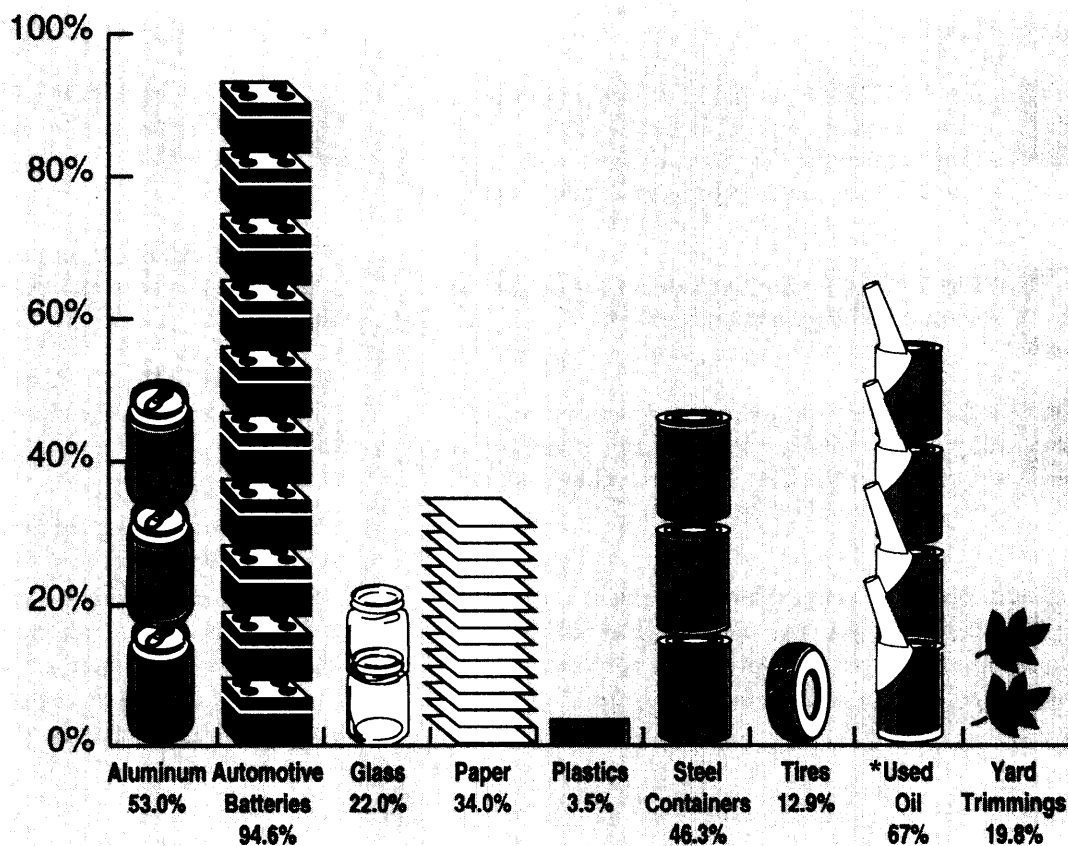


# Environmental Fact Sheet

## Recycling Municipal Solid Waste: 1994 Facts and Figures

In the United States, we generated approximately 207 million tons of municipal solid waste (MSW) in 1993—an average of 4.4 pounds per person per day. To safely and effectively manage all of this trash, communities across the nation are using “integrated waste management systems,” which combine source reduction, recycling, combustion, and landfilling to manage waste. Recycling, including composting, is a key component of many integrated waste management systems. EPA has challenged the nation to reduce and recycle at least 25 percent of its MSW (in 1993, the nation’s overall recycling rate was just under 22 percent). Many communities have far exceeded the national goal. This fact sheet describes eight of the primary components of the MSW stream, along with their generation rate, the percentage of the MSW stream they represent, and their recovery rate.

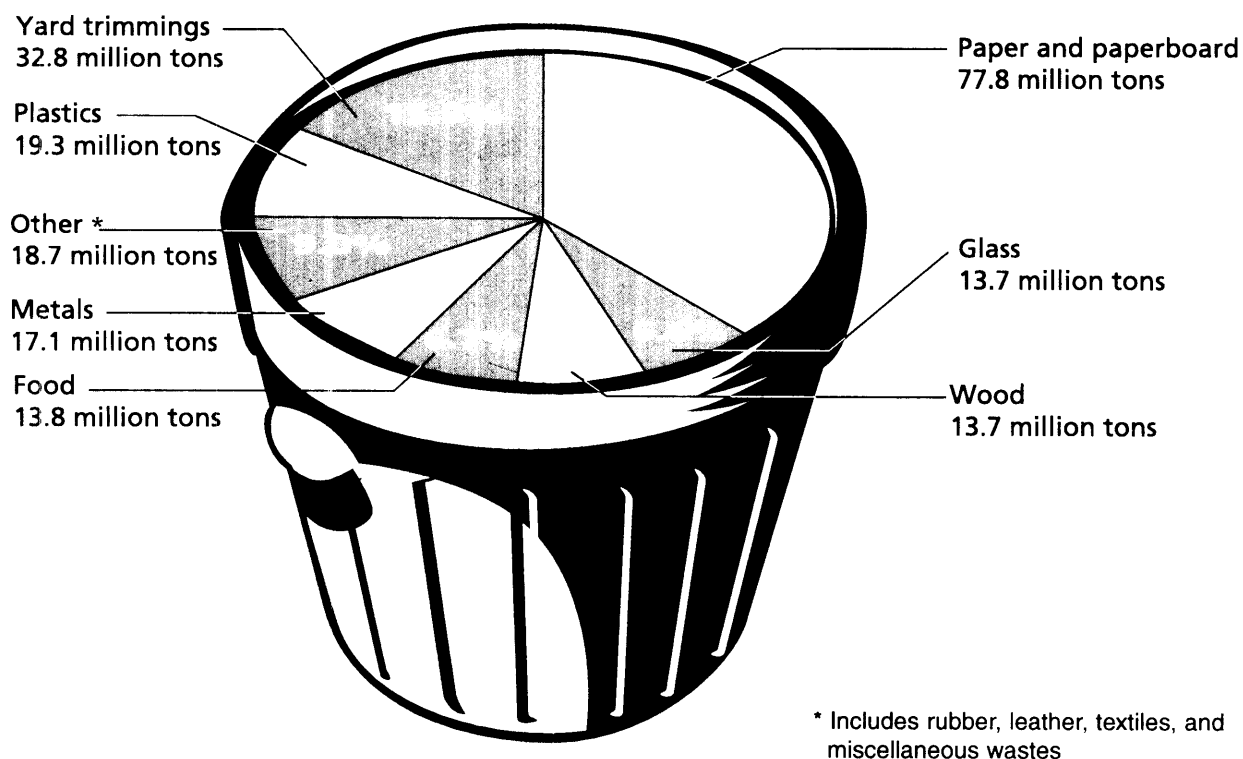
### 1993 Recovery Rates for Major MSW Components



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## Materials Generated in MSW by Weight, 1993

Total weight = 206.9 million tons



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### Aluminum



**GENERATION:** A total of 3 million tons of aluminum waste was generated in 1993. Aluminum containers and packaging, such as soft drink and beer cans, contributed 2 million tons.



**PERCENT:** Aluminum made up 1.4 percent of the total MSW generated in 1993.



**RECOVERY:** Approximately 53 percent of all aluminum containers and packaging were recycled in 1993. The overall recycling rate for aluminum was 35.4 percent in 1993.

Aluminum generally has a high market value, and aluminum cans supply a large percentage of the income for many municipal recycling programs. Almost all of the aluminum collected is used to make new cans.

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### Automotive Batteries



**GENERATION:** About 1.7 million tons of used automotive (lead-acid) batteries were generated in 1993.



**PERCENT:** Automotive batteries constitute less than 1 percent of the MSW stream.



**RECOVERY:** About 95 percent of automotive batteries were recycled in 1993.

Although automotive batteries constitute a small portion of the MSW stream, they contain metals that may be a concern when disposed of in landfills and combustors. All three components of automotive batteries are recyclable: the lead, the acid, and the plastic casing. Retailers often accept used automotive batteries that manufacturers then recycle into new batteries.

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## Ferrous Metals



**GENERATION:** About 12.9 million tons of ferrous metal waste (e.g., iron and steel) was generated in 1993.



**PERCENT:** Ferrous metals constituted 6.2 percent of the MSW stream in 1993.



**RECOVERY:** Overall, about 26.1 percent of ferrous metals in MSW were recycled in 1993. More than 46.3 percent of steel cans and other steel packaging materials were recycled. Much greater amounts of steel are recovered; however, these steel products (e.g., junked cars, steel girders) are usually not considered MSW.

Demand for steel scrap is growing as steelmakers are using more steel scrap to produce new products and less scrap is being produced within the steel-making process. Some steel foundries are also beginning to use steel cans as a source of new raw materials.

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## Glass



**GENERATION:** Approximately 13.7 million tons of glass waste was generated in 1993. Food and beverage containers made up almost 90 percent of this amount; the remainder came from products like cookware and glassware, home furnishings, and plate glass.



**PERCENT:** Glass constituted 6.6 percent of the MSW stream in 1993.



**RECOVERY:** About 24.6 percent of all glass food and beverage containers were recycled in 1993. Glass had an overall recovery rate of 22 percent in 1993.

Glass manufacturers typically use 30 percent crushed glass (known as "cullet") along with raw materials to make new glass. Cullet also can be used as an aggregate in road building.

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## Paper and Paperboard



**GENERATION:** Nearly 77.8 million tons of paper and paperboard waste was generated in 1993.



**PERCENT:** Paper and paperboard constitute the largest portion of the MSW stream, representing 37.6 percent in 1993.



**RECOVERY:** Paper had an overall recycling rate of 34 percent in 1993. About 55.5 percent of corrugated boxes, 45.7 percent of newspapers, 16.2 percent of books, 18 percent of magazines, and 36.5 percent of office papers were recycled in 1993.

Markets for recycled paper products are generally stable and expanding as more mills build new deinking facilities to process waste paper and as the demand for recycled paper products grows. Significant new capacity has come on line over the past several years. Paper is recycled into paper products, paperboard products, and construction products.

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## Plastics



**GENERATION:** Over 19 million tons of plastic waste was generated in 1993.



**PERCENT:** Plastics comprised 9.3 percent of the total MSW stream in 1993.



**RECOVERY:** About 3.5 percent of all plastics were recycled in 1993, with plastic soda bottles being the most commonly recycled product (more than 41 percent were recovered).

Much of the plastic that ends up in the waste stream is from packaging and containers. Plastics recycling has increased dramatically in recent years. Products made from recycled plastic include drainage pipes, toys, carpet, filler for pillows and sleeping bags, and cassette casings. While accounting for just over 9 percent of the MSW stream by weight, plastics made up nearly 24 percent of the total waste stream by volume in 1993.

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## Tires



**GENERATION:** Approximately 3.4 million tons of rubber tires (or 250 million scrap tires—about 1 tire per person in the United States) were generated in 1993.



**PERCENT:** Tires made up about 1.6 percent of the MSW stream in 1993.



**RECOVERY:** In 1993, approximately 12.9 percent of scrap tires were recycled.

Scrap used tires are difficult to dispose of in landfills and waste combustors. An estimated 1 billion tires are currently stockpiled. These stockpiles can provide convenient habitats for rodents, serve as breeding grounds for mosquitos, and pose fire hazards. Of the scrap tires that are utilized, most are burned for energy. Scrap tires also are used for rubberized asphalt paving, molded rubber products, and athletic surfaces.

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## Yard Trimmings



**GENERATION:** Nearly 33 million tons of yard trimmings (including grass, leaves, and tree and brush trimmings) were generated in 1993.



**PERCENT:** Yard trimmings made up 15.9 percent of the MSW stream in 1993.



**RECOVERY:** In 1993, nearly 20 percent of yard trimmings were composted.

Yard trimmings can be transformed into compost for homeowners, farmers, public agencies, landscapers, and nurseries. Grass clippings can be beneficial when left on the lawn.

Source of data for this fact sheet: U.S. EPA's *Characterization of Municipal Solid Waste in the United States: 1994 Update*, Office of Solid Waste and Emergency Response. Data are from 1993. \*Used oil data are from 1990.

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## \*Used Oil



**GENERATION:** Over 1.3 billion gallons of used oil are generated yearly.



**PERCENT:** Used oil makes up less than 1 percent of the MSW stream.



**RECOVERY:** Sixty-seven percent of all used oil is recovered (900 million gallons). Only 10 percent of the amount generated by people who change their own motor oil is returned to collection programs.

If disposed of improperly (i.e., poured down sewage drains), used oil can contaminate soil, ground water, and surface water. Many state and local governments are taking steps to ensure the safe and effective management of used oil. In some communities, used motor oil is collected at service stations, corporate or municipal collection sites, or curbside.